SUPPORT DIRECTORATE

FIVE YEAR ADP PLAN

I. FY 1964 - 1968
II. FY 1969 - 1973

OPRB

24 August 1970

ASPIN Conclusions and Recommendations

II - Computer Applications in Support of Intelligence Production

Pgs II 18-20

57. The Agency establish as standard procedure in the development of new collection systems the coordination of the data collection and data forwarding formats with the individuals who must perform the data reduction and analysis of the data should the collection system become operational.

58. The Information Processing Board assure the acquisition, development and use of one or more general data management systems which are sufficiently close to the general design requirements for Agency data processing applications to permit their adaptation and use for a wide range of data processing applications and data processing centers. We believe that general systems to incorporate such applications may best be acquired from commercial vendors in the interest of economy of maintenance, and simplicity and generality of system operation. Experience with indigenous development of such systems seems to indicate that we tend to build overly elaborate systems which provide better for certain internal requirements but tend to violate the other canons outlined above.

59. The Information Processing Board assure that the present capability for development of a unique program to process an application is maintained, so that any application whose objective is clearly unobtainable by incorporation into a general data management system may continue to be developed. We would make it clear that increased use of general data management systems should not displace other applications programming activity except where its speed, economy and prospects for ease of data exchange make it more attractive. It seems ideal, however, for small, infrequently used programs which are subject to change over time.

60. The Information Processing Board and its Technical Panel be charged with creating the means for the development of meaningful communications between the systems analyst-programmer and the substantive analyst who may be engaged in the common development of a computer application. Have them assure that the requisite training is given to accelerate the reduction of communications barriers which still exist.

61. The Agency provide time and professional and clerical assistance to a few talented individuals each year to explore, develop, and test essentially new techniques or new concepts in the use of ADP to support intelligence analysis and production. These applications may be developed under the leadership of either the substantive component, or OCS, depending upon the nature of the application and the resources to do the job.

should be extended to include support, MIS, etc. etc.

62. The Information Processing Board assure that the present effort to provide a general time-sharing capability in OCS to serve the interest of the Agency as a whole be strengthened to provide not only on-line but also remote batch processing and remote job entry via terminals distributed so as to make them convenient to users throughout the intelligence production components.

why look over OCS shoulder + not CRS, NPIC and RID?

63. The Information Processing Board, in consultation with the interested parties, assure that the OCS Interactive Services System provides a general data management system capable of providing an on-line, quick response capability for large information storage and retrieval of the type characterized by the [redacted] data bases. We believe that the present and foreseeable rates of use for these files in an on-line environment are not high enough to warrant economic use of individual processors to support them.

25X1A

how? Same comment as above

64. The Agency seek to secure an evaluation of the present COINS experiment at the earliest possible moment in an effort to provide clearer guidance for future Agency planning for participation in Intelligence Community ADP activities.

No comment

65. The Information Processing Board define minimum standards for control over data entry, data ~~base~~ documentation and file management for any ADP application serving more than one component, (defined as a unit under the first line supervisor).

what + how?

III. Office of Computer Services (OCS) Activities

Pgs III. 12-13

30. We recommend that: OCS develop in consultation with the Information Processing Board a mechanism for communicating plans for major computer systems changes to user components and of

seeking concurrence

eliciting and reviewing user input to these plans before they are ready for submission to the Information Processing Board for review antecedent to approval by the Executive Director-Comptroller.

31. A complete set of procedures be published and maintained which provides enough information to assure that a job can be written (including JCC) and run without intervention from OCS programmers.

32. Applications programmers (this would presumably include a major share of the applications division's personnel) from OCS should be assigned to and, where feasible, colocated with analysts in the production organization for whom they are designing and programming. Their work during their period of assignment should be controlled by the host production organization except that their rotation back to internal OCS assignment should be negotiated with OCS.

33. Increased attention should be given by OCS, in close cooperation with NPIC/AID and ORD/AM, to the development of a strong computer graphics capability for support of analyst use of the time-sharing system. The AUTOMAP data base should be developed toward an on-line utility which can be summoned as an outline map or chart for superimposing other data for analyzing spatial relationships. These data in combination with the map should be susceptible to linkages to computational routines to further test intuitive visual observations.

34. Present planning for OCS to acquire and test a proprietary general data management system should be encouraged. Plans for this acquisition should be moved forward as rapidly as a careful coordination of the proposal can be concluded. We believe that this movement should be coordinated with the major users of OCS and with each of the intelligence production components who have their own data processing center, i.e., NPIC and CRS. The objectives in acquiring general data management software ought to be (1) to move toward as wide a coverage of our major processing activities within any given system as is intellectually and operationally acceptable, (2) to establish each system selected as an Agency standard for the type(s) of application identified, and (3) to recognize that there will still exist computer applications which will require unique programs.

35. A single, integrated, interactive services system to provide on-line service for intelligence production components at headquarters should be the Agency near-term objective.

IV - A Central Reference System

Pgs IV 11-12

35. We recommend that: The Central Reference Service be established as the point of contact for any general request for intelligence information from outside the Agency or from within where there is no immediate known point where the information needed is available.

36. Only those data which are generated and accessioned by the reference center be provided as a direct response by the center and that all other data are sought first from another center in the Agency which may have resources to respond.

37. Work underway on an automated dissemination system should be maintained and each distribution point to be employed in the initial system test should be directed to cooperate with CRS in providing carefully constructed "dictionary" terms to try to guide this system. The work should be recognized as experimental at this stage, but it should be widely encouraged for its long-term prospects.

38. Planning for undertaking an extension of the automated dissemination system from SI input to all State, Defense and Agency positive intelligence information received in machine language should be undertaken coincident with the beginning of feasibility testing.

39. The present concept of CRS indexing should be continued, and a systematic effort undertaken to facilitate indexing input from the substantive analyst and to encourage such input to the system.

40. The Central Reference Service should seek as a general objective a standardized document reference number which can be put on the intelligence information document before it is disseminated. This reference number should be capable of being generated and included in the format of any automated dissemination system, and should become a part of that system as quickly as possible. It should be made an Agency standard immediately and expanded into a Community standard eventually.

35. A single, integrated, interactive services system to provide on-line service for intelligence production components at headquarters should be the Agency near-term objective.

IV - A Central Reference System

Pgs IV 11-12

35. We recommend that: The Central Reference Service be established as the point of contact for any general request for intelligence information from outside the Agency or from within where there is no immediate known point where the information needed is available.

36. Only those data which are generated and accessioned by the reference center be provided as a direct response by the center and that all other data are sought first from another center in the Agency which may have resources to respond.

37. Work underway on an automated dissemination system should be maintained and each distribution point to be employed in the initial system test should be directed to cooperate with CRS in providing carefully constructed "dictionary" terms to try to guide this system. The work should be recognized as experimental at this stage, but it should be widely encouraged for its long-term prospects.

38. Planning for undertaking an extension of the automated dissemination system from SI input to all State, Defense and Agency positive intelligence information received in machine language should be undertaken coincident with the beginning of feasibility testing.

39. The present concept of CRS indexing should be continued, and a systematic effort undertaken to facilitate indexing input from the substantive analyst and to encourage such input to the system.

40. The Central Reference Service should seek as a general objective a standardized document reference number which can be put on the intelligence information document before it is disseminated. This reference number should be capable of being generated and included in the format of any automated dissemination system, and should become a part of that system as quickly as possible. It should be made an Agency standard immediately and expanded into a Community standard eventually.

41. The concept and scope of document indexing by a reference center should be developed by a top management decision. Established at a lower level, it results either in extensive duplication of effort or in abandonment of control over the use of intelligence documentation. Document index processing has, however, been customized by each processing organization which supports an individual or organization reference activity.

42. The Central Reference Service should create a personnel-area-subject index to other organized collections of information in the Agency. This index should include both personal and organizational collections of information and authorization points for control of access to the respective collections. This index is an important and complex system which must be carefully defined, coordinated and implemented. CRS should be assigned responsibility for design and development of the system but they must have the full cooperation of all other offices and Directorates. Development of such a system would pose an excellent test of the Information Processing Board.

43. The present method of document storage and retrieval is acceptable and should be maintained. It provides speed when it is genuinely needed and is far more economical than any system of electronic storage or video storage that we have encountered. We believe that the Agency should continue to experiment with a limited number of applications in which documents are created, stored, and searched retrospectively in an electronic format, because development of an on-line document index will almost certainly require a simultaneous improvement in the speed of delivery of documents.

44. An extensive interactive (man-machine-data base) capability with the Central Reference Service intelligence document index should be developed and tested as quickly as feasible. This is one of the few large data bases in which we think there is both wide interest and frequent use. Indeed we are told by analysts that the principal limitation on their use of the system is its slow response time.

V - Research and Development (R&D) in Information Processing

Pgs V 5-6

13. Both ORD and OCS have long experience in general contact and service throughout the Agency. Beyond that point most of the activities

which seem critical to us for information processing research and development have always been performed in OCS. A genuine effort was made early in the development of ORD/Au to coordinate its activity with OCS, but this effort disintegrated from a halting start to a general awareness of each other's existence although some effort to restore an interaction has begun this year. Individuals located in OCS have both the technical expertise and the awareness of processing activity throughout the Agency required to provide an optimum service to the user. What must be created in OCS is confidence that Agency management will support the separation of general development activity from the press of production activity. Having seen the Agency willing to support development work with money and positions elsewhere and having seen the diseconomics of the present system, we believe that OCS would be willing as well as able to undertake control over this activity.

14. We recommend that the DD/S&T review the division of effort between ORD and OCS in the area of information processing research and development against an alternative allocation of function and effort which would:

a. Provide for the subsequent problem definition and computer application design and development effort to be moved from ORD to OCS.

b. Provide for the transfer of essentially standard computer processing equipment from ORD to OCS and for OCS to provide a level of experimental or developmental computer processing time necessary to support the expanded experimental function outlined above. We would for example urge that processing time might be made available on machines appropriate to the work involved rather than on a single machine which is used only for experimental work.

c. Provide for the transfer of other equipment from the IPRD laboratory to those surviving or anticipated development programs which may use it most effectively, the rest to be transferred to surplus.

d. Provide for a review of existing ORD contracts through the Information Processing Board and selected prospective users to determine which of those contracts should be continued and under whose leadership they should proceed.

e. Provide that subsequent ADP equipment or software test and analysis be conducted by OCS except where the items are a direct adjunct of a special processing center such as NPIC. The special unit would procure and test the latter products.

f. Provide for OCS to issue a current awareness publication similar to its present Tech Notes to announce new activities, new products, and new developments which its research and development component considers of general interest for Agency components engaged in information processing.

15. In addition we recommend that the DD/S&T and the Information Processing Board reject the proposal of the R&D Subcommittee of the USIB Information Handling Committee which proposes a community-wide R&D center on the basis of the recent experience with COINS and the IPRD which we believe demonstrate both the difficulty of an integrated community activity and the impracticality of performing research and development on non-existent or badly defined requirements.

16. Finally we recommend that research and development projects or programs in the area of information processing be submitted to the same scrutiny as that proposed for ADP projects in the section below dealing with management.

VI - Organizational and Management Elements of Automatic Data Processing

Pgs VI 10-11

26. We recommend that: The Agency reassert a policy of providing a high degree of centralization in data processing activity in the Office of Computer Services, that this policy be tempered by permitting the acquisition of small or medium computer processors by functional organizations where there is a demonstrable technical-computational economy in using a stand-alone computer system, and that this policy continue the present emphasis on the functional component (user) responsibility for problem definition and problem solution. In short, we recommend that computer organizations develop the systems necessary to run the computers and run them, and that functional production people prepare the data and the processing steps required for its transformation by computer.

27. A central technical management review of major ADP projects be created under the present umbrella of Executive Director-Comptroller responsibility for Agency ADP management, that a full-time position of ADP Advisor to the Executive Director-Comptroller be created for an experienced ADP professional whose responsibility it would be to:

a. advise the Executive Director-Comptroller on all professional/technical matters relating to ADP;

b. be chairman of the IP Board and the director of its permanent staff;

c. review the various local plans, provide technical input to IPB and, periodically, develop a statement of long-term ADP objectives for the Agency;

d. assign computer application design proposals to the suitable functional/technical review components;

e. prepare Agency-wide ADP technical standards;

f. serve as chairman of the Agency-wide ADP Career Service Board; and

g. serve as focal point for internal leadership and for external relations in ADP technical/professional matters. 11/8

28. Existing central ADP planning be strengthened to provide:

a. for a more definitive outline of Agency objectives to be achieved in related or overlapping office plans and for regular revision and publication of the Agency ADP Plan;

b. for the definition and publication of Agency-wide ADP technical standards beyond the present work on nationwide (USASI) standards; and

c. for a standard format and procedure for the proposal and review of major requests for the acquisition of computer systems or of computer processing applications.

29. A means of pricing data processing services performed by computer centers be developed, and that each user component be required to budget for its data processing services and transfer the funds to pay for these services in essentially the same way that property funds are handled.

30. An Agency ADP Career Service be created.

31. Existing ADP training programs introduce additional emphasis on the changing responsibility or role of the user in an on-line and/or real-time computer environment, and that functional organizations review the need for unit training of personnel in the use of quantitative and/or logical techniques in indigenous analytical problems.

32. The Director/OCS be an ex officio participant on the Information Processing Board and that the DD/S&T should be represented on the Board by an individual who reflects the computer user population of the whole Directorate. The presence of the Director/OCS on the Board is imperative, but we believe he should participate in his capacity as director of computer processing rather than as the representative of a Directorate with large processing requirements.